Responses to Staff questions

1. Is it logical to separate the analyses into a Facilities Study and Feasibility/Impact Study, as has been done in the current draft, or are the analyses required to complete the studies normally performed as part of a single, all-encompassing study? Is it possible that combining the studies would be less costly than keeping the studies separate or vice versa?

A. It is logical to separate the analyses into a Facilities Study and Feasibility/Impact Study, as has been done in the current draft. Different work groups often perform the Feasibility/Impact Study and the subsequent Facilities Study. The Facilities Study is built from the results of the Feasibility/Impact Study. Performing a Feasibility/Impact Study first is beneficial to the potential interconnection customer in both cost and schedule. The results of the Feasibility/Impact Study will allow the potential interconnection customer to make an informed business decision before authorizing a more costly and time consuming Facilities Study.

2. The draft rule essentially fast tracks proposed interconnections that pass the Primary and/or Secondary Screening Criteria. If a unit fails the Primary and Secondary Screening Criteria, then the interconnection provider has much greater discretion over, the need for, and scope of, additional studies and, ultimately, approval of the interconnection application. What can be done to better define the decision criteria that interconnection providers employ when evaluating proposed interconnections that fail both screens? What can be done to add more certainty to the process, so the interconnection customer does not face a "black box" of potential costs and extended timeframes?

A. Distributed resource installations that have low system impact are generally processed very quickly with a minimum of study time, customer cost, etc. In order to assist potential interconnection customers, ComEd published its "Guidelines for the Interconnection of Distributed Generation to the ComEd System" (the "DG Book"). The DG Book explains processes associated with the interconnection of distributed generation to the ComEd system and includes a range of technical information and requirements concerning rates, metering, telemetry, stability, wind and photovoltaic generation, application forms, inspection criteria, approval milestones and generation plan designations. The DG Book provides application criteria to a prospective interconnection customer in as high a degree of detail that can be provided without a specific study. Copies of the DG Book have been distributed to the ICC, the City of Chicago, the FERC, the Midwest Cogeneration Association and various distributed generation suppliers and potential customers. It is currently available electronically to anyone upon request at no cost. The DG Book has guided hundreds of customer interconnections to the ComEd system.

ComEd's system has been built over many years and has been designed to meet the needs of a diverse customer base. Many factors affect circuit topography such as density of loads in an area, differing reliability requirements of customers in different areas, age of the system in a given area, types of circuits (i.e. overhead or underground), etc. Older circuits, station equipment, and protection systems were not designed to accommodate distributed resources because there were no distributed resources to accommodate. Modern station equipment and protection systems can more easily and more economically accept distributed resources. Given the diverse nature of the system and its evolution over time, prospective distributed resource interconnections require specific study. The variety of circuit configurations, station configurations, and protection system configurations means that specifics concerning a proposed interconnection arrangement beyond those stated in the DG Book cannot be defined without a specific study.

ComEd processes interconnection requests in a timely manner and completes interconnection projects within schedule. There have also been situations where an interconnection customer does not complete its work by its own scheduled date. Additionally, ComEd has completed interconnection projects in which customers have not been ready to generate for over a year following interconnection. ComEd continues to work closely with interconnection customers to accommodate their schedules.

3. If you are advocating an interconnection queue, explain why a queue is necessary. Also, provide specific language that would govern the order of the queue. Be sure that your proposed queue language accounts for the possibility of one interconnection customer applying before another but being held up longer due to study requirements.

A. ComEd has a history of working with interconnection customers in an open, positive and professional manner, and ComEd's record of new distribution and transmission generation interconnected to the ComEd system demonstrates this success.

An interconnection queue, maintained by the PJM RTO, is already in existence that manages FERC- jurisdictional wholesale transmission and distribution interconnection requests. The PJM queue may be publicly viewed on its website at www.pjm.com <http://www.pjm.com>. A separate state-jurisdictional retail distribution interconnection queue, maintained by ComEd, would be required to fairly manage the processing of state-jurisdictional retail distribution interconnection requests.

A requirement for a facsimile or e-mail application submittal would provide a date and time-stamp to effectively implement a retail distribution interconnection queue. The submitted interconnection application should not be made public to protect the competitive advantage of the applicant. Rather, specific information (for example, Queue Date/Time, Generator Unit Information, Planned Service Date, City/County, Substation or Circuit Number, Interconnection Agreement Date and Interconnection Status) should be posted on a public website to provide transparency to the process while concealing the identity of the potential generator. The dedicated website could

also reduce workload and costs associated with providing procedures, technical documents, contracts, notices and other interconnection process requirements.

Defined process deadlines would also provide structure and fairness to the interconnection process. Generators that are in queue with a completed interconnection study, but not necessarily capable or willing to execute the interconnection for whatever reason, would be required to execute the interconnection within a reasonable period of time or be dropped from the queue. Without deadlines, queue "squatters" could needlessly tie up distribution system capacity and capability, perhaps burdening other projects that are ready and able to execute interconnections with additional interconnection impacts, upgrades and costs.

State-jurisdictional retail distribution interconnection requests generally require minimal upgrades and shorter schedules as compared with larger FERC-jurisdictional wholesale generators. An expedited process should not be implemented that favors the smallest over slightly larger interconnection requests within the retail distribution interconnection queue. Given that the majority of the requests should fall in the "less than a year" category, expediting certain projects within such a narrow range of schedules may not provide the desired benefit but rather the manipulation of application requirements and anticipated schedules. Additionally, if the smallest generator with the shortest schedule is consistently expedited in the interconnection queue, other projects with slightly larger interconnections and longer schedules could be harmed by consistently being moved back. The initial feasibility study phase of the process should identify an adequate level of preliminary information for the interconnection customer to allow for critical business decisions to be made or for the project to proceed as scheduled.

4. Describe proposed interconnections, either hypothetical or actual, that involve a potential violation on an affected system (i.e. a system not owned or operated by interconnection provider) and describe how the coordination of studies addressing the impact of the proposed interconnection on affected systems.

A. A large generator connected in close proximity to a municipal utility, neighboring utility, transmission system governed by an RTO or ISO, non-affiliated distribution system owner or other interconnected distributed resource owner ("affected system" owner), could hypothetically impact circuit breakers or other affected system owned equipment. The interconnection customer would need to share the interconnection information with the affected system owner to resolve any issues. Coordination with the affected system owner and the interconnection customer and the interconnection provider would be accomplished through notification via phone calls, email and U.S. Mail. After providing the affected system owner the information necessary for it to determine corrective action to resolve any violations, the affected system owner would need to perform its own system study.

5. What is the universe of "affected systems" (e.g. municipal systems, transmission systems governed by RTO or ISO, non-affiliated distribution systems)? Briefly describe how you envision coordination between the interconnection provider and each type of affected system identified. Provide examples of coordination between

the interconnection provider and “affected systems” when distributed resources that are currently installed were proposed and studied for interconnection.

A. Affected systems can include any of the following; municipal utility, neighboring utility, transmission systems governed by an RTO or ISO, non-affiliated distribution system owner or other interconnected distributed resource owner. Coordination with affected system owners takes place via phone calls, e-mail and U.S. Mail. Project specific information is shared with the affected system owner along with a request to have a study performed (e.g., a request for a fault duty study on feeder XXXX assuming the installation of a XX kW generator at location XXX). The affected system owner would be responsible for performing the study on its system and providing results back to the requesting interconnection customer. The requesting interconnection customer would also be responsible for any fees levied by the affected system owner and paying those directly to the affected system owner.

An example of this situation occurred on ComEd's system when the City of Geneva proposed City owned interconnecting generators to the Geneva system, in close proximity with ComEd's distribution system. The City requested ComEd perform an analysis on its distribution system and to provide the results to the City. ComEd performed a study and provided results to the City in a project diagram and in relay specification notes.

Generally speaking, however, the interconnection provider should not be required to act as a liaison between the interconnection customer and an affected system because it would put the interconnection provider in a difficult position of having to advocate on behalf of the interconnection customer in discussions with the operator of the affected system about changes that might be necessary to accommodate the interconnection and which would be charged to the interconnection customer.

6. Provide any other comments that are not related to specific sections of the Draft.

A. This document covers only initial interconnections of distributed resources. It does not address changes to the interconnection provider's system that may occur after the distributed resource is installed and which involve costs that would not have been incurred, but for the existence of the interconnection arrangement, and how these costs should be paid for. Examples of these changes might be:

- The interconnection provider wishes to install equipment that changes the size of the circuit section to which the distributed resource is connected in order to provide greater reliability to customers connected to the circuit. This smaller circuit section may have a significantly different minimum or peak load and thus require changes that were not required upon initial interconnection of the distributed resource. The existence of the distributed resource should not inhibit the interconnection provider from implementing such reliability improvements. It is common practice to create smaller circuit sections.
- A load customer or customers on a common circuit section with a distributed resource moves or goes out of business. The minimum or peak load changes. This loss of load may cause a lower minimum or peak load and thus require changes that were not required upon initial connection. In a worst-case

scenario, loss of load could require the distributed resource to cease generation.

- A circuit containing a distributed resource is overloaded. The least cost option to alleviate the overload is to move a small section of the circuit that includes the distributed resource. The distributed resource is now moved to another circuit that may need to be modified to accept the distributed resource.

The rulemaking should not preclude the interconnection provider from recovering its costs in these cases in the manner in which such costs would normally be recovered.

The Commission should impose notification requirements on interconnection customers. Before they cease some or all of their generation, either permanently or temporarily, interconnection customers should be required to give the interconnection provider 60 days written notice to permit the IP sufficient time to make any adjustments that might be needed on the interconnected circuit to compensate for the increased net load.

We are also attaching two technical white papers prepared by ComEd's System Protection engineers in order to provide additional detail concerning "Islanding Protection" and "Distributed Resources on Spot Networks." These papers are in response to questions raised during the March 12, 2004 Workshop. These papers concern generators of sufficient size that they would require a feasibility study.